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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/800,914

03/16/2004

Nobuyoshi Karashima

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EXAMINER

VU, QUYNH-NHU HOANG

ART UNIT

PAPER NUMBER

3763

MAIL DATE

DELIVERY MODE

03/13/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/800,914	Applicant(s) KARASHIMA, NOBUYOSHI	
	Examiner QUYNH-NHU H. VU	Art Unit 3763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Response to Amendment

Amendment filed on 2/1/08 has been entered.

Claims 9 and 12 are present for examination.

Claims 1-8, 10-11 and 13 are cancelled.

Arguments regarding claims 9 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Jensen (US 2003/0044755), Keusch et al. (US 6,635,045) and Okabe (JP 08-164212, cited from IDS).

AAPA discloses, (in Specification, on pages 1-4), a device and method for sterilizing and treating a tooth using iontophoresis comprising: contacting an oral lesion in the body tissue with a drug solution retained by a positive electrode section and it is necessary to discontinue treatment to apply the drug solution (pg 3, lines 1-9 of the Spec); contacting a body tissue in the vicinity of the lesion with a second solution retained by a negative electrode section (pg 3, line 10+) to provide a closed electric circuit between these electrode section and the lesion (page 2, lines 7-16).

The AAPA in the Specification does not clearly disclose that a conducting with current of 40µA or lower into the closed circuit for 8 to 30 seconds; wherein the drug solution is a solution containing a cationic surface active agent or an amphoteric surface active agent as a main ingredient; and the second solution retained by a negative electrode is a sodium chloride solution.

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Jensen discloses that a device and method is similar to the AAPA. The treatments are including dental pulp or root canal or a superficial lesion on the body (abstract and para [0022]). In order to perform these treatments, the device inherently including the drug solution or material to treat for any kind of disease state of teeth (para [0031]). For example: sealing of leaking or decay must include the drug solution to be treated. Jensen further discloses that the current value is less than 300 μA , more preferable between 30-300 μA , which is in the range of 40 μA [0075]. As to claim 12, Jensen further discloses that the controller is able to set the current value, voltage value and electric conduction film for the conduction in response to type of the target viscous membrane, thickness of the target skin and area of the target at the lesion (para [0087-0088]).

Additionally, the functional recitation that “for a predetermined time wherein current value, voltage value and electric conduction time for said electric conduction are set in response to thickness and area of a target skin at said lesion” has not been given patentable weight because it is narrative in form. Beside that, the device 10 of Jensen can perform this function above such as an alarm 101 indicating the progress of the electric conduction time set by the controller, see Fig. 1, and para [0087-0088].

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the device of AAPA with a current, voltage values, as taught by Jensen, in order to avoiding the pain for the patient.

Regarding about the value of conduction time is 8 to 30 seconds. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to provide the conducting time between 8-30 seconds, since it has been held that where in the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Okabe provides practical iontophoresis skin using a drug solution comprises a cationic surfactant (see abstract).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the device of AAPA with a cationic surface active agent in iontophoresis, as taught by

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Okabe, which improves bioavailability of a physiologically active peptide medicine with good reproducibility and is inexpensive and has stable sterilization and disinfection effects.

Keusch discloses that a sodium chloride (NaCl) is retained by a negative/cathode electrode (col. 2, lines 6-10), and it is well known in the iontophoresis art also.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the device of AAPA with a sodium chloride (NaCl) solution in a negative electrode, as taught by Keusch, in order to increasing the conductivity and inhibit electrode corrosion.

Response to Arguments

Applicant's arguments with respect to claims 9 and 12 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to QUYNH-NHU H. VU whose telephone number is (571)272-3228. The examiner can normally be reached on 6:00 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nicholas Lucchesi can be reached on 571-272-4977. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Quynh-Nhu H. Vu
Examiner
Art Unit 3763

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/Nicholas D Lucchesi/
Supervisory Patent Examiner, Art Unit 3763